

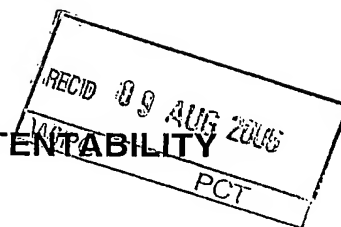
PATENT COOPERATION TREATY



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/BE2005/000001	International filing date (day/month/year) 03.01.2005	Priority date (day/month/year) 29.12.2003	
International Patent Classification (IPC) or national classification and IPC INV. B29C59/02 B29C35/08 B32B31/00 C09J7/02 B29D11/00			
Applicant MACTAC EUROPE S.A. et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 11 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input checked="" type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input checked="" type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 25.07.2005		Date of completion of this report 08.08.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer Brunold, A Telephone No. +49 89 2399-7838 	

**INTERNATIONAL PRELIMINARY REPORT
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Box No. I Basis of the report

1. With regard to the **language**, this report is based on

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-32 as originally filed

Claims, Numbers

1-32 as originally filed

Drawings, Sheets

1/6-6/6 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. II Priority

1. ☐ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:
- ☐ copy of the earlier application whose priority has been claimed (Rule 66.7(a)).
 - ☐ translation of the earlier application whose priority has been claimed (Rule 66.7(b)).
2. ☐ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1). Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:
- see separate sheet**

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees, the applicant has, within the applicable time limit:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest and, where applicable, the protest fee.
 - ☐ paid additional fees under protest but the applicable protest fee was not paid.
 - ☐ neither restricted the claims nor paid additional fees.
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
 - ☒ not complied with for the following reasons:
- see separate sheet**
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☒ all parts.
 - ☐ the parts relating to claims Nos. .

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-25
	No: Claims	26-32
Inventive step (IS)	Yes: Claims	1-25
	No: Claims	26-32
Industrial applicability (IA)	Yes: Claims	1-32
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item II PRIORITY

1. Taking into consideration the arguments given by the *Office belge de la Propriété Intellectuelle* (OPRI), cf. telefax dated 20.04.06, the priority claim is now held to be valid, Rule 43bis.1 PCT, Rule 64.1 PCT, for the following reason:

Present application claims priority from European patent application EP 03079017.4 (e.g. EP 1550546 A1 as published on 06.07.05), having a filing date of 29.12.03, whereas the international filing date of present application is 03.01.05; however, the priority has not expired since evidence has been provided in the above cited telefax that OPRI as the receiving office had officially been closed from 25.12.04 until 02.01.05. Therefore, legally, not more than 12 months have passed from the date of filing of said earlier EP-document.

Re Item IV LACK OF UNITY OF INVENTION

- 2.1 This Authority considers that the international application contains the following separate inventions or groups of inventions which are not so linked as to form a single general inventive concept (Rule 13.1 PCT):

Group 1: Claims 1 to 25

Independent claims 1 and 2 refer to a method of forming a three-dimensional microstructure on a surface of a support and of microstructuring of a flexible surface of a substrate; independent claim 25 refers to a three-dimensionally microstructured film being manufactured by said method(s).

Group 2: Claims 26 to 32

Independent claim 26 discloses a multilayer sheet comprising a flexible

support (comprising a first and second layer of silicone) and a flexible substrate having a proximate first surface and opposing distal second surface.

2.2 There are no features in common between the two groups of inventions as in particular product claim 25 refers to a "...film...comprising a three dimensionally *microstructured*..." surface, whereas product claim 26 explicitly refers to a "...multilayer sheet comprising...a three dimensional *topography*..." (note: the more general and broader term 'topography' is not limited to 'microstructure'). Furthermore, the additional features of the microstructured film of claim 25 resulting from the process of manufacture following f.ex. method claim 2 (cf. claim 25: "...any one of method claims 1 to 23..."), i.e. having an adhesive surface and being microstructured by inverse replication, are considered not to be comprised by the multilayered sheet as disclosed in claim 26.

2.3 The remaining features of the different inventions solve different problems by means of different potentially special technical features and the general problem cannot be considered as constituting a single general inventive concept between the inventions:

The problem to be solved by the first group of inventions may be regarded as to provide a method for forming a three-dimensional microstructure on a flat surface of a support (cf. description p. 2 lines 22, 23) and also to provide a method for three-dimensional microstructuring of a surface made of a flexible substrate (cf. description p. 3 lines 11 to 13). The solution proposed in the claims of group 1 refers to applying a first and a second layer of silicone on a support whereas said layers of silicone are fixed by hardening by heating or by exposure to an ultraviolet or electronic radiation, or a combination thereof.

The problem to be solved by the second group of inventions may be regarded as to provide a microstructured article which allows easy repositioning and easy elimination of bubbles during application (cf. description on p. 31 lines 3 to 8). The solution proposed in the claims of group 2 therefore refers to an article being equipped with a pressure sensitive adhesive label having a release liner, whereas a flexible substrate shows a proximate first surface being in releasable contact with a flexible

support and said proximate first surface being equipped with a mating inversely replicated three-dimensional topography.

- 2.4 Neither the objective problem underlying the subjects of the claimed inventions, nor their solutions defined by the special technical features allow for a relationship to be established between the said inventions, which involves a single general inventive concept.

As a consequence, the present application contains two different groups of inventions dealing with different subject-matter since a single general inventive concept cannot be distinguished between these two groups of inventions. Consequently, the application does not meet the requirements of unity of invention as defined in Rules 13.1 and 13.2 PCT.

**Re Item V Reasoned statement under Rule 43bis1(a)(i) with regard to novelty,
inventive step or industrial applicability;
Citations and explanations supporting such statement**

3. STATE OF THE ART

- 3.1 Reference is made to the following documents:

D1:	WO 97/43319 A	D2:	US-A-4 986 496
D3:	EP-A-0 382 420	D4:	US-A-5 133 516
D5:	US-A-5 814 355	D6:	EP-A-0 426 441
D7:	US-A-5 254 390	D8:	WO 99/55791 A
D9:	US 2004/216833 A1	D10:	WO 98/18878 A
D11:	US 2003/082326 A1	D12:	US 2003/221770 A1
D13:	EP-A-1 550 546		

4. NOVELTY [Art. 33(2) PCT], INVENTIVE STEP [Art. 33(3) PCT]

4.1 The subject-matter as claimed in claims 1 to 25 is considered to be new, Art. 33(2) PCT, and to involve an inventive step, Art. 33(3) PCT. Further reference is made to the discussion given under items 1 and 6.1 of present IPER.

4.2.1 However, D8 discloses (references in parentheses applying to D8) a multilayer sheet (cf. in particular fig. 3) comprising

(a) a flexible support comprising

(i) a sheetlike structure having a first broad surface and opposing second broad surface (substrate 90),

(ii) a first layer of a silicone containing material in a sheetlike coating (pressure-sensitive adhesive 20) that is fixed to at least said first broad surface of said aforementioned sheetlike structure,

(iii) a second layer of a silicone containing material (pressure-sensitive adhesive 40) fixed to said first layer as a plurality of ridges thereby providing a flexible support (cf. carrier 30; p. 5 lines 22, 23) having on at least one broad surface thereof a three dimensional topography of a plurality of ridges (damageable layers 50, 55; p. 8 line 15 to p. 9 line 22; p. 11 line 27: holographic film 55), and

(b) a flexible substrate (retroreflective layer 80) having a proximate first surface and opposing distal second surface wherein said proximate first surface is in releasable contact with said three dimensional surface of said flexible support (p. 1 line 35 to p. 2 line 3) and said proximate first surface have a mating inversely replicated three dimensional topography (fig. 3).

The subject-matter of **independent claim 26** is therefore not new (Art. 33(2) PCT).

In addition it is noted that the features in italics of both a *flexible* support and a *flexible*

substrate appear not to be disclosed explicitly in D8; however, these features are seen as being at least implicitly disclosed in D8 since, on the one hand, the two layers of silicone are fixed to a support represented by an elastic carrier 30 (p. 5 line 23), and, on the other hand, the substrate e.g. the retroreflective layer 80 comprises f.ex. polyester (p. 12 line 12) which is also considered to show to a certain extent flexible properties.

- 4.2.2 Furthermore, the subject-matter of **claims 27 to 32** do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to novelty and/or inventive step, and which could render the subject-matter of claim 26 new (Art. 33(2) PCT) and inventive (Art. 33(3) PCT).

5. INDUSTRIAL APPLICABILITY (Art. 33(4) PCT)

- 5.1 For the assessment of the claims 1 to 32 on the question whether they are industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The present application is considered to be industrially applicable, Art. 33(4) PCT, cf. also Rule 67.1(i)-(vi) PCT, PCT-Guidelines II-4.14.

Re Item VI Certain documents cited

- 6.1 Since the priority claim now appears to be valid, cf. under item II above, document D13 indicated in the international search report as a document of category "L" might no longer be regarded as relevant state of the art during a further e.g. European national proceeding

Re Item VIII Certain observations on the international application

- 7.1 Although claims 1 and 2 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Art. 6 PCT.

Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection. Hence, claims 1 and 2 do not meet the requirements of Art. 6 PCT.

- 7.2 Claims 25 and 26 have also been drafted as separate independent claims, both referring to an article. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Art. 6 PCT, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection. Hence, claims 25 and 26 do not meet the requirements of Art. 6 PCT.

- 7.3 Independent claims 25 and 26 are not in the two-part form, Rule 6.3(b) PCT.

- 7.4 The term "...or other purposes..." as given in claim 25 lines 19, 20, is unclear, Art. 6 PCT.

- 7.5 The feature "...flexible support is not distorted..." used in claim 27 is written as a negative feature. Such a formulation is only possible if no positive formulation of the feature in suit can be considered, which seems not to be the case in present application.

- 7.6 The vague and imprecise statement in the description on p. 32 last paragraph implies that the subject-matter for which protection is sought may be different to that defined

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by the claims, Art. 6 PCT.

- 7.7 The features of the claims are not provided with reference signs placed in parentheses, Rule 6.2(b) PCT.
- 7.8 Claim 2 is supposed to comprises all the features of claim 1 and is therefore not appropriately formulated as a claim dependent on the latter, Rule 6.4 PCT.
- 7.9 The citations given in the description should be as follows: EP 0149135 A2 (cf. p. 1 line 25), EP 0180598 B1 (cf. p. 2 line 2), EP 0861307 B1 (cf. p. 2 line 3), WO 97/43319 A1 (cf. p. 2 line 4).
